

WHAT IS CLAIMED IS:

1. A system for distributing a packet received over a network, the system comprising:
 - (a) a plurality of servers connected to the network; and
 - (b) a load balancer, connected to the network, for selecting one of the plurality of servers according to a calculation.
2. The system of claim 1, wherein said calculation is determined such that each packet from a particular session is sent to the same server.
3. The system of claim 1, wherein said calculation is independent of any feedback from the plurality of servers.
4. The system of claim 3, wherein said load balancer does not receive feedback from said plurality of servers.
5. The system of claim 2, wherein said load balancer does not maintain a session table.
6. The system of claim 1, wherein said calculation is based on data associated with the packet.
7. The system of claim 6, wherein said data is invariant from packet to packet within a session.
8. The system of claim 6, wherein at least a portion of the data is associated with a source of the packet.
9. The system of claim 6, wherein at least a portion of the data is associated with a destination of the packet.
10. The system of claim 6, wherein at least a portion of the data is associated with a destination port of the packet.

11. The system of claim 6, wherein at least a portion of the data is associated with a source port of the packet.

12. The system of claim 6, wherein at least a portion of the data is associated with a protocol number of the packet.

13. The system of claim 1, wherein said calculation is performed according to the formula:

$$((SRC_IP_ADDR + DEST_IP_ADDR + DEST_PORT) \% N)$$

wherein SRC_IP_ADDR is the source IP address of the packet; DEST_IP_ADDR is the destination IP address of the packet; DEST_PORT is the port of the destination of the packet; % is a modulo operation; and N is the number of servers.

14. The system of claim 1, wherein said plurality of servers are redundant servers.

15. The system of claim 13, wherein said load balancer is termed a first load balancer, and further comprising a second load balancer, connected to the network, for selecting, according to the formula, one of the plurality of servers for receiving another packet received over the network.

16. The system according to claim 15, wherein said second load balancer is operable only if said first load balancer is inoperable.

17. The system of claim 1, wherein said calculation is performed according to the formula:

$$((SRC_IP_ADDR + SRC_PORT + DEST_IP_ADDR + DEST_PORT + PROTOCOL) \% N)$$

wherein SRC_IP_ADDR is the source IP address of the packet; SRC PORT is the source port number of the packet; DEST_IP_ADDR is the destination IP address of the packet; DEST_PORT is the port of the destination of the packet; PROTOCOL is the protocol number of the packet, % is a modulo

operation; and N is the number of servers.

18. A method for load balancing a plurality of servers, comprising:
 - (a) receiving a packet;
 - (b) determining a source IP address of said packet, a destination IP address of said packet and a port of the destination of said packet;
 - (c) identifying one of the plurality of servers according to a calculation.
19. The method of claim 1, wherein said calculation is based on data

associated with the packet.

20. The method of claim 19, wherein said data is invariant from packet to packet within a session.

21. The method of claim 19, wherein at least a portion of the data is associated with a source of the packet.

22. The method of claim 19, wherein at least a portion of the data is associated with a destination of the packet.

23. The method of claim 19, wherein at least a portion of the data is associated with a destination port of the packet.

24. The method of claim 19, wherein at least a portion of the data is associated with a source port of the packet.

25. The method of claim 19, wherein at least a portion of the data is associated with a protocol number of the packet.

26. The method of claim 18, wherein the calculation is performed according to the following formula:

$$((SRC_IP_ADDR + DEST_IP_ADDR + DEST_PORT) \% N)$$

wherein SRC_IP_ADDR is the source IP address of the packet; DEST_IP_ADDR is the destination IP address of the packet; DEST_PORT is the port of the destination of

the packet; % is a modulo operator; and N is the number of servers; and further comprising:

(d) distributing said packet to the identified one of said plurality of servers.

27. The method of claim 18, wherein the formula is calculated according to the formula:

$$((\text{SRC_IP_ADDR} + \text{SRC_PORT} + \text{DEST_IP_ADDR} + \text{DEST_PORT} + \text{PROTOCOL}) \% N)$$

wherein SRC_IP_ADDR is the source IP address of the packet; SRC_PORT is the source port number of the packet; DEST_IP_ADDR is the destination IP address of the packet; DEST_PORT is the port of the destination of the packet; PROTOCOL is the protocol number; % is a modulo operator; and N is the number of servers; and further comprising:

(d) distributing said packet to the identified one of said plurality of servers.

28. A method for load balancing a plurality of servers, comprising:

(a) receiving a packet;

distributing the received packet to a particular one of the plurality of servers s according to a calculation, wherein said calculation is based on data associated with the packet, and wherein

wherein each of said plurality of routers/proxies performs the calculation based on data associated with the packet.

29. The method of claim 28, wherein the calculation is performed according to the formula: $((\text{SRC_IP_ADDR} + \text{DEST_IP_ADDR} + \text{DEST_PORT}) \% N)$

wherein SRC_IP_ADDR is the source IP address of the packet; DEST_IP_ADDR is the destination IP address of the packet; DEST_PORT is the port of the destination of the packet; % is a modulo operator; and N is the number of servers.

30. The method of claim 28; wherein the calculation is performed independently of any feedback from said servers.

31. A computer program product for enabling a computer to load balance a plurality of servers, the computer program comprising:

software instructions for enabling the computer to perform predetermined operations, and

a computer readable medium bearing the software instructions;

the predetermined operations including :

- (a) receiving a packet;
- (b) determining packet information including a source IP address of the packet, a destination IP address of the packet and a port of the destination of the packet; and
- (c) selecting a particular server from the plurality of servers for receiving a particular packet according to a calculation based on the packet information.

32. The computer program product of claim 31, wherein the calculation is based on data associated with the packet.

33. The computer program product of claim 31, wherein the calculation is performed according to the formula:

$$((\text{SRC_IP_ADDR} + \text{DEST_IP_ADDR} + \text{DEST_PORT}) \% N)$$

wherein SRC_IP_ADDR is the source IP address of the packet; DEST_IP_ADDR is the

destination IP address of the packet; DEST_PORT is the port of the destination of the packet; % is a modulo operator; and N is the number of servers .

34. A system of distributing a packet over a network, comprising:
a plurality of routers/proxies, each of said routers/proxies receiving the packet, and each of said router/proxies performing a calculation for selecting one of the routers/proxies for handling the packet.
35. The system of claim 34, wherein the calculation is based on data associated with the data.
36. The system of claim 35, wherein the data is invariant from packet to packet within a session.
37. The system of claim 35, wherein at least a portion of the data is associated with a source of the packet.
38. The system of claim 35, wherein at least a portion of the data is associated with a destination of the packet.
39. The system of claim 35, wherein at least a portion of the data is associated with a source port number of the packet.
40. The method of claim 35, wherein at least a portion of the data is associated with a protocol number of the packet.
41. The method of claim 34, wherein the calculation is performed according to the following formula:

$$((\text{SRC_IP_ADDR} + \text{DEST_IP_ADDR} + \text{DEST_PORT}) \% N)$$

wherein SRC_IP_ADDR is the source IP address of the packet; DEST_IP_ADDR is the destination IP address of the packet; DEST_PORT is the port of the destination of the packet; % is a modulo operator; and N is the number of routers/proxies.

42. The system of claim 1, further comprising a plurality of routers/proxies, each of said routers/proxies receiving the packet, and each of said router/proxies performing a calculation for selecting one of the routers/proxies for handling the packet.

43. A system of claim 42, wherein each of the routers/proxies performs the calculation based on data associated with the packet.

44. A system of distributing a packet over a network, comprising:
a plurality of servers, each of said servers receiving the packet, and each of said servers performing a calculation for selecting one of the routers/proxies for handling the packet.

45. The system of claim 44, wherein the calculation is based on data associated with the packet.

46. The system of claim 44, wherein the calculation is performed according to the following formula:

$$((\text{SRC_IP_ADDR} + \text{DEST_IP_ADDR} + \text{DEST_PORT}) \% N)$$

wherein SRC_IP_ADDR is the source IP address of the packet; DEST_IP_ADDR is the destination IP address of the packet; DEST_PORT is the port of the destination of the packet; % is a modulo operator; and N is the number of servers.

47. The system of claim 44, further comprising a plurality of routers/proxies, each of said routers/proxies receiving the packet, and each of said router/proxies performing a calculation for selecting one of the routers/proxies for handling the packet.

48. The system of claim 47, wherein the calculation by each of the router/proxies is based on data associated with the packet.